

CLAIMS

[00115] 1) A method for tracking the movement of cargo during shipment from a shipper having a first location defined by a latitude and a longitude to a consignee having a second location differing from said first location and defined by a second latitude and a second longitude said method comprising the steps of:

a) generating a routing guide stored on a computer system, said routing guide representing an expected path from the first location to the second location, said path being defined by a continuous series of expected locations each defined by an expected latitude, an expected longitude and an expected time;

b) establishing at least one tolerance level for each of said expected locations defined by a maximum absolute distance from said expected location, each of said at least one tolerance level associated with a shipment condition;

c) attaching an electronic seal to said cargo, said electronic seal capable of transmitting an actual location of said cargo to said computer system at a discrete time;

d) comparing at a plurality of discrete times said actual location to the one of said expected locations having an expected time which corresponds to said discrete time;

e) calculating the actual absolute distance of the actual location of the cargo to the expected location of the cargo;

f) establishing the condition of the cargo by comparing said actual absolute distance to said maximum absolute distance; and

g) communicating said condition to at least one of said shipper and said consignee.

[00116] 2) The method of claim 1 wherein said electronic seal transmits said actual location to said computer system via satellite.

[00117] 3) The method of claim 1 further comprising the step of creating a booking record associated with said computer system, the booking record containing the origin and destination of said cargo and the identity of carriers and location of interchanges in the cargo, said routing guide being generated based upon the contents of the booking record.

[00118] 4) A system for monitoring the shipment of cargo from a shipper having a first location defined by a latitude and a longitude to a consignee having a second location differing from said first location and defined by a second latitude and a second longitude, comprising:

a) a computer system having routing guide associated therewith, said routing guide having a plurality of way points, each of said way points defined by an expected latitude, an expected longitude and a unique time at which the cargo is expected at said way point;

b) at least one electronic seal attached to said cargo, said seal comprising a means for detecting its current location defined by a latitude and a longitude, a means for detecting the opening of the cargo and a means for periodic two-way wireless communication of data between said seal and said computer system; wherein

said computer system periodically receives data from said electronic seal indicating the location of said cargo and wherein said computer system compares said data to said routing guide to determine the condition of said cargo during shipment.

[00119] 5) The system of claim 4 wherein said data transmitted by said at least one electronic seal includes a signal transmitted to said computer system, initiated by said electronic seal upon closure of said cargo.

[00120] 6) The system of claim 5 wherein said data transmitted by said at least one electronic seal includes a signal transmitted to said computer system, initiated by said electronic seal upon opening of said cargo.

[00121] 7) The system of claim 4 further comprising a second electronic seal hidden within said cargo, said second electronic seal having circuitry for receiving data from said at least one electronic seal and means for communication with said computer system, said second electronic seal being activated upon opening of said cargo.